## WHAT IS CLAIMED IS:

1. A resource management system, comprising:

a plurality of electronic equipments classified into groups according to capacity thereof;

a plurality of lower layer transmission devices with ports where said plurality of electronic equipments are operable to be connected;

an upper transmission device operable to connect said plurality of lower layer transmission devices in subordinates and to relay information among said plurality of electronic equipments being connected to said plurality of lower layer transmission devices; and

a resource management server operable to manage resources to be used for transmitting information between said upper transmission device and said plurality of lower layer transmission devices;

wherein said resource management server is operable to manage information of resource reservation status and information of groups of all said electronic equipments connected to said plurality of lower layer transmission devices;

wherein, when said plurality of electronic equipments are newly connected to said plurality of lower layer transmission devices, each respective electronic equipment is operable to send, to said resource management server, a notice of resource reservation request and group information of the respective electronic equipment; and

wherein, when said resource management server receives the notice, said resource management server is operable to set up a path in a network connecting the newly connected electronic equipments and other electronic equipments belonging to the same group that the notice indicates, and said resource management server is operable to judge if the resource reservation request according to the notice is acceptable on the path set up in the network.

2. A resource management system according to Claim 1, wherein said resource

management server is operable to update reservation status of the resources when the resource reservation request according to the notice is acceptable on the path set up in the network, and operable to make at least a resource reservation for the respective electronic equipment.

- 3. A resource management system according to Claim 1, wherein said resource management server is operable to generate picture information displaying whether the resource reservation request is acceptable or not.
- 4. A resource management system according to Claim 1, wherein, when a resource reservation request is rejected, said resource management server is operable to generate picture information displaying a location on the network that causes the rejection.
- 5. A resource management system according to Claim 1, wherein, when a resource reservation request is rejected, said resource management server is operable to search an alternative port through which the resource reservation request is acceptable and to generate picture information displaying a location of the searched alternative port.
- 6. A resource management system according to Claim 1, wherein, when a resource reservation request is rejected and when there exist a plurality of grades of service quality, said resource management server is operable to make another resource reservation request with a lower grade of service quality.
- 7. A resource management system according to Claim 1, wherein, when a resource reservation request is rejected, said resource management server is operable to cancel the present reservation status and to make a new resource reservation request.
- 8. A resource management system according to Claim 7, wherein the new resource reservation request is made in order of demand for higher grade resources.
- 9. A resource management system according to Claim 7, wherein the new resource reservation request is made in order of demand for lower grade resources.

- 10. A resource management system according to Claim 7, wherein the new resource reservation request is made as directed by a user input.
- 11. A resource management system according to Claim 1, wherein, when a resource reservation request is not actually practiced although reservation thereof is made, the resource reservation request is diverted to other services.